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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,198	02/22/2005	Akihito Saitoh	03500.017500	7749
5514 7590 01/25/2008 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER THOMPSON, CAMIE S	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 01/25/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,198	<b>Applicant(s)</b> SAITOH ET AL.	
	<b>Examiner</b> Camie S. Thompson	<b>Art Unit</b> 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Amendment filed 11/15/07.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicant's amendment and accompanying remarks filed November 15, 2007 are acknowledged.
2. Examiner acknowledges newly added claims 11-20.
3. The rejection of claims 1-5 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over U.S. Patent Application 10/525,622 is withdrawn due to applicant's argument.

### ***Claim Rejections - 35 USC § 102***

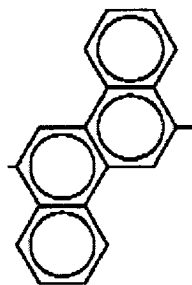
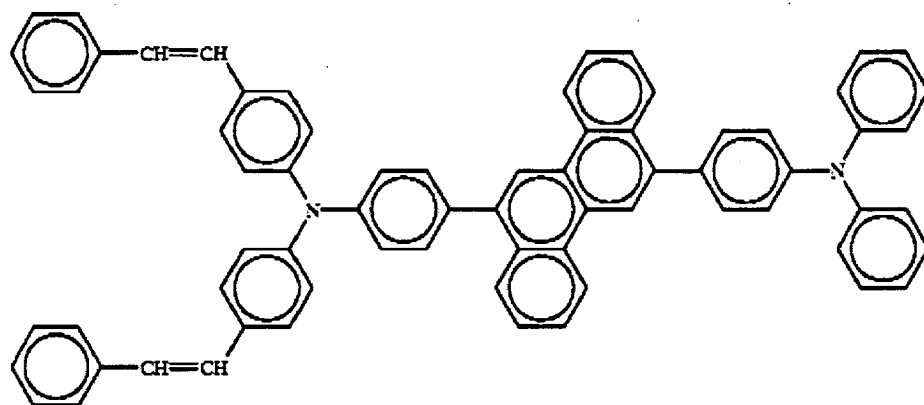
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

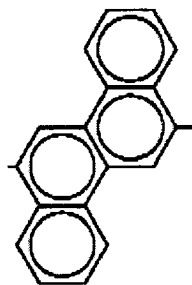
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/39247.

The European reference discloses materials for organic electroluminescence device wherein the device comprises a multi-layer structure with an anode; hole transporting layer; light emitting layer; electron transporting layer and cathode (see columns 90-91). The reference discloses that the light emitting layer comprises a material such as compound 29



Compound 29 reads on the present claims when  $X_2$  is  ;  $X_1$  and  $X_3$  phenyl groups;

$Y_1$  and  $Y_2$  are phenyl groups as permitted by the present claims 11-16. Also, compound 29 reads on the present claims with  $m$  and  $n$  being 0 since  $X_1$  to  $X_3$  are not single bonds but aryl groups (phenyl). Additionally, the reference also discloses that the light emitting layer can comprise rubrene, which reads on formulae 2-4. Rubrene is a substituted aryl (see entire document).

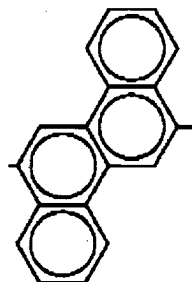
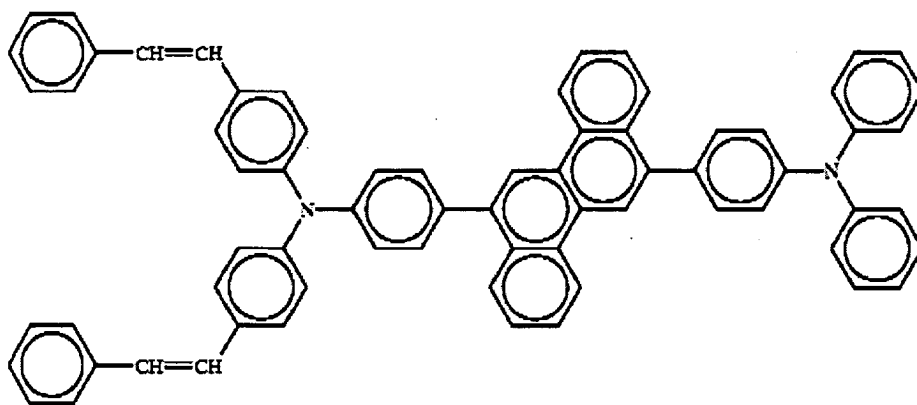
### ***Claim Rejections - 35 USC § 103***

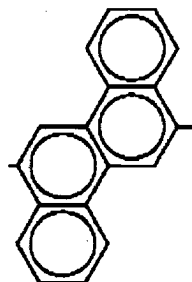
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/39247 in view of Xie et al., U.S. Patent Number 5,989,737.

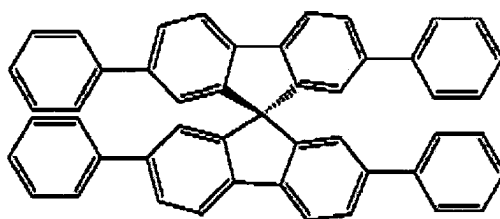
The European reference discloses materials for organic electroluminescence device wherein the device comprises a multi-layer structure with an anode; hole transporting layer; light emitting layer; electron transporting layer and cathode (see columns 90-91). The reference discloses that the light emitting layer comprises a material such as compound 29



Compound 29 reads on the present claims when  $X_2$  is  ;  $X_1$  and  $X_3$  phenyl groups;

$Y_1$  and  $Y_2$  are phenyl groups as permitted by the present claims 11-16. Also, compound 29 reads

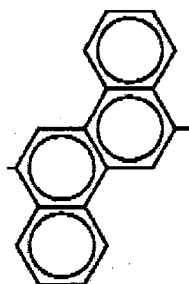
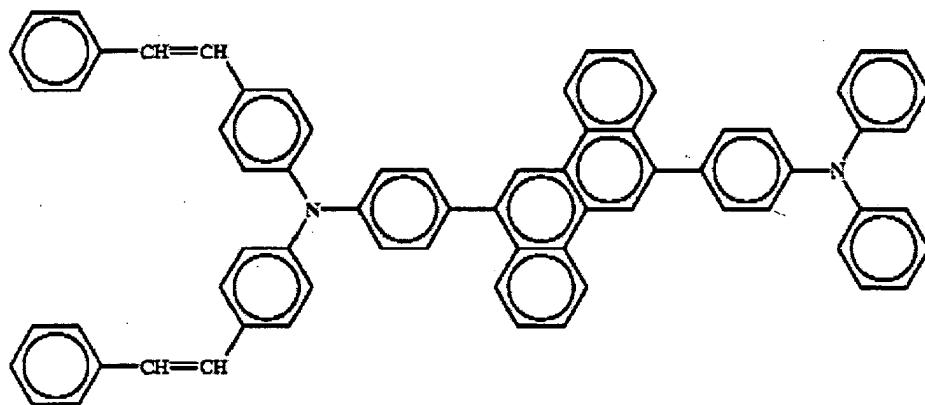
on the present claims with m and n being 0 since  $X_1$  to  $X_3$  are not single bonds but aryl groups (phenyl). The European reference does not disclose a spiro compound in addition to the arylamine compound in the device. Xie discloses electroluminescent device comprising an anode and a cathode with a plurality of organic layers disposed therebetween (see column 4, lines 20-37). Xie discloses that one of the organic layers is comprised of a aromatic amine and a

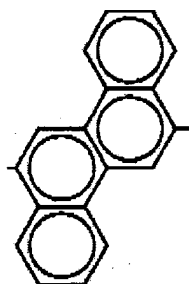


polycyclic compound such as . The combination of the polycyclic compound and the aromatic amine affects electron-hole recombination. Therefore, it would have been obvious to one of ordinary skill in the art to combine the spiro compound of the Xie reference with the European reference in order to have light emission due to electron-hole recombination for high luminescence.

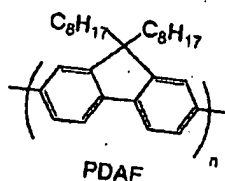
8. Claims 5 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO00/39247 in view of JP 2002-212150.

The European reference discloses materials for organic electroluminescence device wherein the device comprises a multi-layer structure with an anode; hole transporting layer; light emitting layer; electron transporting layer and cathode (see columns 90-91). The reference discloses that the light emitting layer comprises a material such as compound 29



Compound 29 reads on the present claims when  $X_2$  is ;  $X_1$  and  $X_3$  phenyl groups;

$Y_1$  and  $Y_2$  are phenyl groups as permitted by the present claims 11-16. Also, compound 29 reads on the present claims with  $m$  and  $n$  being 0 since  $X_1$  to  $X_3$  are not single bonds but aryl groups (phenyl). The European reference does not disclose a fluorene compound in addition to the arylamine compound in the device. The Japanese reference discloses an organic light emission element that comprises an anode and a cathode with a plurality of organic layers disposed therebetween. Also, the Japanese reference discloses that at least one layer of the organic layers comprises an arylamine and a fluorene monomer with the structure



The combination of the fluorene compound and the aromatic amine affects electron-hole recombination. Therefore, it would have been obvious to one of ordinary skill in the art to combine the spiro compound of the Japanese reference with the European reference in order to have light emission due to electron-hole recombination for high luminescence.

***Response to Arguments***

9. Applicant's arguments with respect to the present claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris, can be reached at (571) 272-1478. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
TERREL MORRIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700